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October 7, 2002

EX PARTE – Via Messenger

Ms. Marlene Dortch  
Secretary  
Federal Communications Commission  
The Portals  
445 12<sup>th</sup> Street, S.W.  
Washington, DC 20554

RECEIVED

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

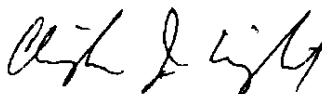
Re: CC Docket Nos. 01-338, 96-98, 98-147

Dear Ms. Dortch:

On October 4, Tom Koutsky and George Ford of Z-Tel and I met with Bill Maher, Jeff Carlisle and Rob Tanner of the Wireline Competition Bureau. We distributed and discussed the attached documents at these meetings.

In accordance with FCC rules, a copy of this letter is being filed in the above-captioned dockets.

Sincerely,



Christopher J. Wright  
Counsel to Z-Tel Communications, Inc.

# **Unbundled Local Switching and UNE-P**

Thomas M. Koutsky

George S. Ford

Christopher J. Wright

October 4, 2002

CC-Brockdale, MO 63001-3338, 96-98, 98-1417





# Today's Agenda

- What Z-Tel does with UNE-P
- Empirical research on unbundling
- Legal hurdles to any ULS restriction
- Impairment Standard
- Forging role for state commissions

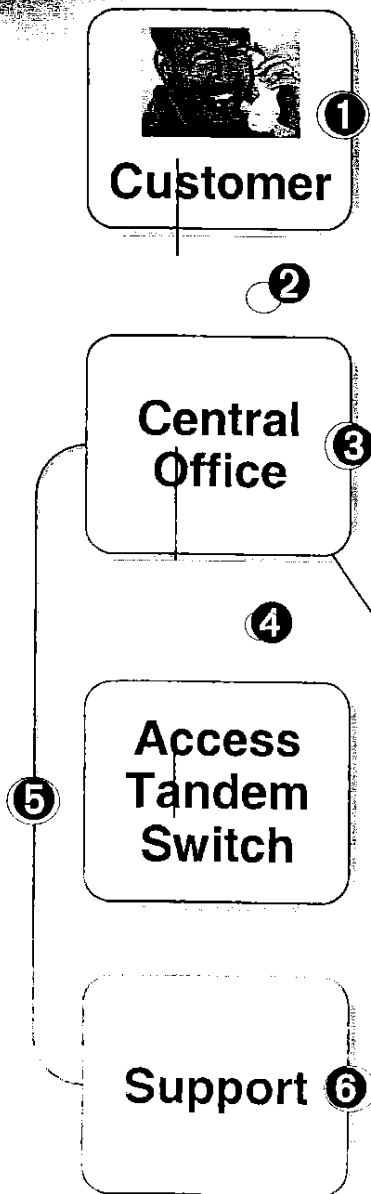


## **Z-Tel's Innovative Uses of UNE-P**



# Elements of UNE-P

Unlike resale, we control all elements.



## Elements:

- ① Network Interface Device
- ② Local Loop
- ③ Local Switching
- ④ Interoffice Transport
- ⑤ Signaling and Call Related Databases (AIN)
- ⑥ Operations Support Systems

**Access to the Switch Port in UNE-P allows  
CLEC to integrate innovative technology**



# We're What the Act Was About

**Innovative and new local services to  
*mass-market residential and small  
business customers***

For example:

- Remote access to calling & messaging via phone or Web
- Internet-accessible voicemail
- Multiple-number Call Forwarding
- Dial-by-voice functionality
- Web conferencing



# What the Bells Don't Offer...






- [1] Place Call
- [2] Message Center ————— Mom  
Dad  
Kids
- [3] Account Options
- [4] PVA(Personal Voice Assistant)
- [5] Conference Calling
- [6] Unified Messaging Coming Soon!
- [7] Tasks & Calendaring Coming Soon!
- [8] Content Coming Soon!
- [9] Yellow Pages Coming Soon!
- [0] Customer Care



# Intelligent Dial Tone

Introducing Z-Line Personal Voice Assistant (PVA)

**Speech-Activated Calling**

**FREE For 30 Days!**

Introducing Z-Line PVA, your Personal Voice Assistant!

- Make search requests with a voice command
- Send text messages to contacts
- Use with your existing calendar
- **FREE** 30 days of Personal Voice Assistant
- **FREE** for 30 days, with no dial tone
- Don't miss from any phone

Just tear off the card to get started!

Get **30 days** of speech-activated long distance, and more, **FREE!**

Visit [www.ztel.com/pva](http://www.ztel.com/pva) today.

Offer valid for new customers only. Offer ends 12/31/04. See website for details. ©2004 Z-Line Telephones, Inc. All rights reserved.





# 1<sup>st</sup> Nationwide Local Phone Company



Mass-market consumers in red can get Z-Tel service today.



# **Empirical Research on Effects of Unbundling**



# UNE-P: The Future

- In considering, “What happens after UNE-P?”, FCC should not adopt paradigm that “locks in” particular model of competitive entry
- UNE-Loop entrants are *just* as dependent upon ILEC as UNE-P entrants
  - They cannot serve customers without loops and collocation
  - UNE-Loop entrants will have invested millions of dollars into a network architecture that mirrors the Bells – same COs, same loops
  - Potential for UNE-Loop “lock in” – once millions invested in ILEC network architecture, will that entrant *ever* migrate away from ILEC any further?
- UNE-P entrants free to migrate customers *totally* away from ILEC network once those networks are built
  - Since no CapEx associated with ILEC architecture, **UNE-P customer base is mobile**
  - If FCC wants new networks, facilitating open bidding for mass-market customer bases helps – locking CLEC customer bases into perpetual ILEC loop dependence does not
  - **These alternative networks will not be built without “customers first” – UNE-P provides that customer base**
  - See Beard, Ford and Spiwak, “Why AdCo?”, 54 Fed Comms. L. J. 421 (2002).



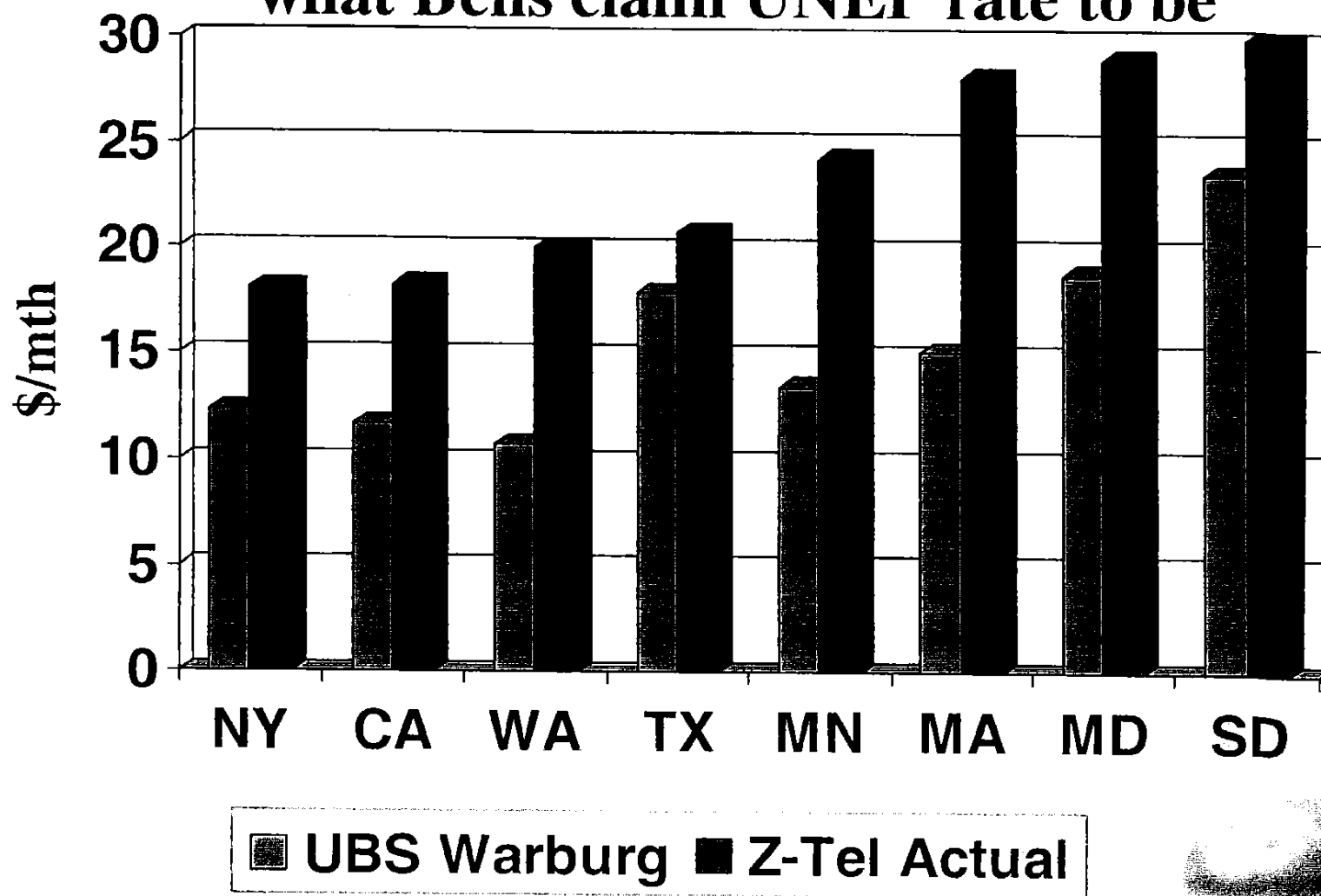
# Research Supports Pro-Competitive, Pro-Investment Effects of UNE-P

- *Residential/Small Business Competitive Entry greater where UNE Platform available without restriction*
  - Z-Tel Policy Paper No. 3
  - Data: FCC Local Competition Reports
- *UNE-P promotes facilities investment*
  - Z-Tel Policy Paper No. 4
  - Data: looks at switch deployment over time, using FCC Local Competition data, LERG
- *Bells make money selling UNE-P to Z-Tel*
  - September 23 and 30, 2002 Z-Tel ex parte letters to Chairman Powell
  - SBC CFO confirms that competition in Texas – *where UNE-P has been and is now available without restriction* – is “workable” and “doable”
  - Wall Street reports substantially misstate actual costs of UNE-P



## Real UNE-P Prices

**Z-Tel actual payments >25% more than what Bells claim UNEP rate to be**





# Bells Crying Wolf?

- BOCs average over 50% EBITDA margin selling UNEP to Z-Tel
- Margins **more** than sufficient to cover depreciation and “investment”
  - Z-Tel UNEP payments compared to actual Bell ARMIS operating costs
  - Z-Tel Sept. 23, 2002 letter to Chairman Powell and NARUC President Nugent
  - Z-Tel Sept. 30, 2002 letter to Chairman Powell and NARUC President Nugent
  - Phoenix Center Policy Paper No. 16
- Bells dramatically overstate impact of UNEP; understate UNE-P revenue by over 25% -- or \$7/month per line.
- What happens to Bell profits if UNE-P lines immediately move to facilities? *Bells lose another \$3B per year.*

**Debate is *not* about “what type of competition to have” but about returning lost customers to Bells and increasing prices**



## More Research...

- ***Lower UNE prices do not “discourage” facilities-based entry***

- Beard, Ford and Koutsky, *Facilities-Based Entry into Local Telecommunications* (2002) (attached to Z-Tel Comments)
  - Study also supports findings of Policy Paper No. 4
  - Data: FCC Local Competition data, LERG, state UNE prices
  - **Study entirely un rebutted the record**
- Pelkovits and Ford, *Unbundling and Facilities-Based Entry by CLECs* (2002)
  - Data: ARMIS, FCC Form 477 data (latest available data)

- ***Unbundling and “facilities-based” entry are not substitutes***

- Beard and Ford, *Make or Buy? Unbundled Elements as Substitutes for Competitive Facilities* (2002)
- Data: UNE-P Fact Report, FCC Form 477 data and UNE pricing data
- Estimated demand curves for unbundled loops purchased with switching (UNE-P) and without switching (UNE-L)
- Comparing elasticity of these curves indicates whether CLECs view UNE-P and UNE-L as substitute forms of entry, or whether they are different forms of entry to serve different markets
- Results: **UNE-P and UNE-L are not substitutes**
- Findings support Z-Tel argument that impairment not solved by availability of UNE-L – in fact, forced migration to UNE-L risks unserving the market UNE-P currently supports



# Legal Hurdles

- Core elements of UNE-P (loops, switching and transport) specifically listed in section 271 checklist
  - Legislative history: checklist contains “at a minimum” what should be unbundled under section 251
  - Consistent with purpose of the Act to provide “parity” of “equal access” between IXC’s and ILEC’s into one another’s markets
- Restricting any section 271 element would require section 10 forbearance (Verizon petition) – which is sharply limited
- Application of forbearance by FCC as requested by Verizon exceeds constitutional bounds of FCC’s authority
- Additional state unbundling or access requirements specifically preserved in section 251(d)(3).
  - States adopted core elements of UNE-P under state law before and after Act passed.
  - There is no legal “inconsistency” between an FCC decision not to order unbundling nationally and a state order ordering unbundling locally





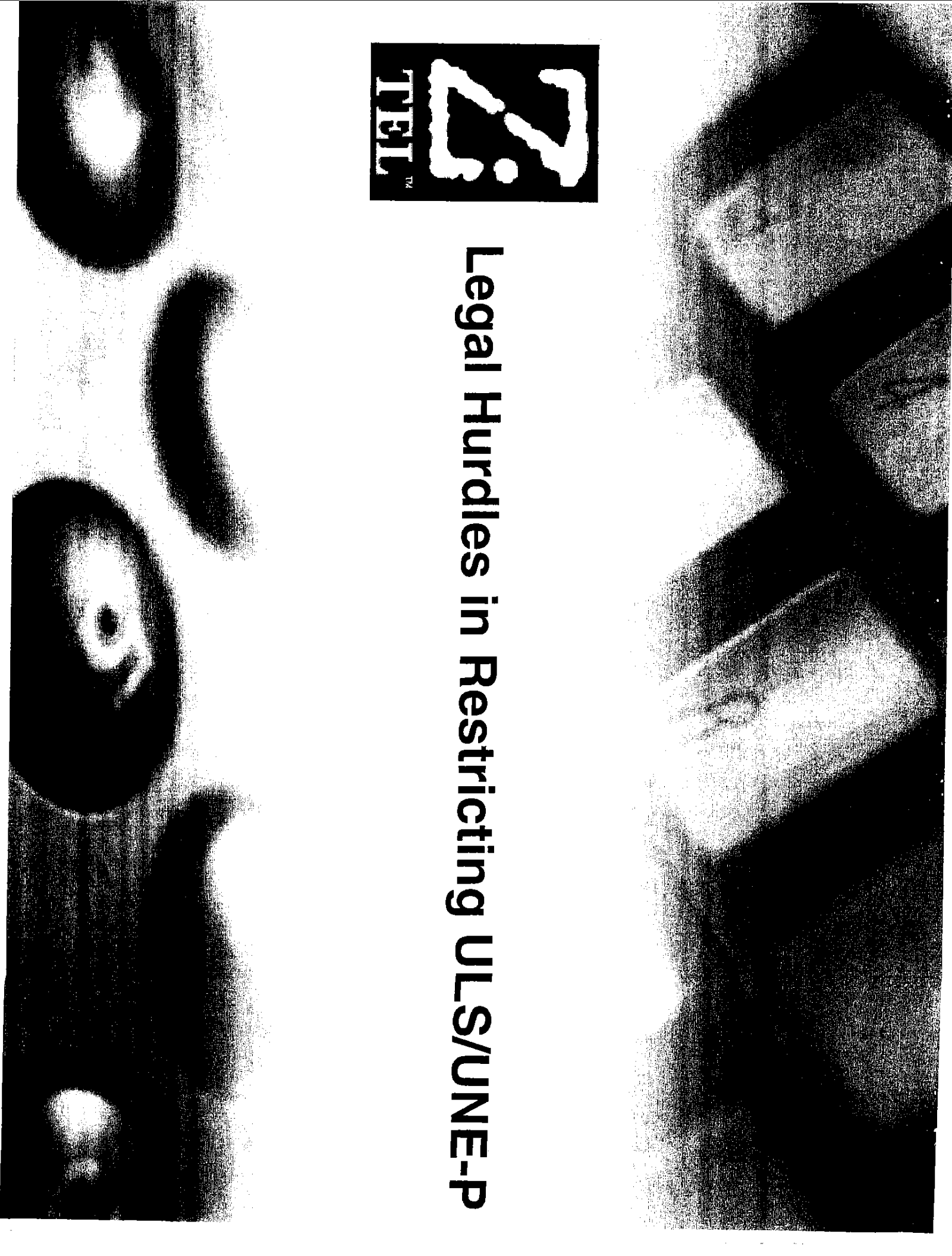
# Utilizing State commissions can help

*USTA Issue: fact-based, granular analysis that does not provide unbundling of “unvarying scope”*

- Rather than illegally preempt states, enlist their assistance
- States can **help** FCC write rules that pass legal muster
- Example: States do fact-finding with regard to whether impairments continue to exist – with particular focus upon whether reduction in output would occur in their states
  - Discovery
  - Cross-examination
  - States that have done this to date have found the UNEP access is warranted to serve the mass market (see Texas) – **current evidence in Triennial Review docket is insufficient to rebut those findings**
- Example: States examine impact of unbundling and UNE-P on retail price regimes (as in NY and IL today)
- FCC can utilize these state findings to determine future federal unbundling rules or applications of those rules



# Legal Hurdles in Restricting ULS/UNE-P





## Legal Hurdles

- Core elements of UNE-P (loops, switching and transport) specifically listed in section 271 checklist
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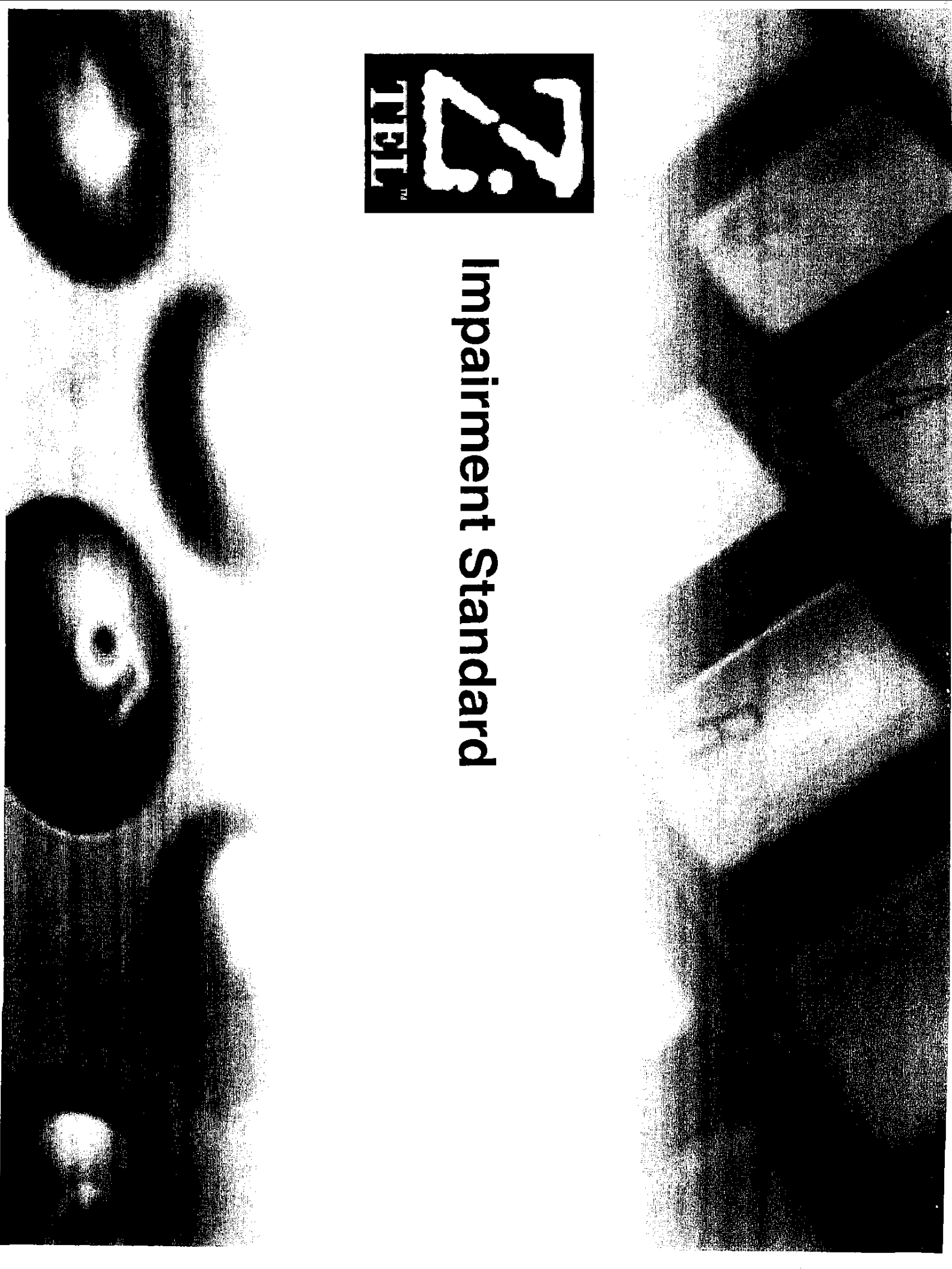
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# Impairment Standard





# Proposed Impairment Framework

1. Begin with market definition – the “service” requesting carrier “seeks to provide”
  - E.g.: the local telecommunications mass-market (Z-Tel Comments Attachment A, or >139MM lines)
  - Consistent with FCC precedent in prior Orders
  - Provides “granularity” *USTA* requests
2. What are the demand-side requirements of “serving” that “market”?
3. What are supply-side requirements of “serving” that “market”?
4. Without unbundled access, can entrant serve as many customers within 2 years as with unbundled access?



## Ford Reply Decl. Section III

*Impairment exists when a lack of access to an ILEC network element reduces a CLEC's output by a small, but significant, and non-transitory amount*

- Complies with *USTA* -- a fact-based analysis
- Requires FCC to consider whether alternatives to element...
  - Are available from other sources in sufficient quantity and quality
  - Can be utilized by entrant in seamless manner
  - Can be implemented without adversely affecting customer service *at service level demanded by consumers for that service*
  - Can be implemented without adversely affecting competitive output
- Flexible enough to consider prices, the “profitability” of particular entry strategies, the “difficulty” of self-provisioning
- “Significant and non-transitory” are objective “limiting principles” grounded in antitrust law



**But under any reasonable impairment standard, Z-Tel is impaired to serve the Mass Market without ULS/UNE-P**





# The “Analog Mass Market”

1. In BOC Merger Orders, FCC has identified “mass market” for local services that includes residential and small businesses
2. Demand-Side Characteristics of the Mass Market
  - Low revenue per month (\$40-80/line)
  - Highly reliable service (turn up service quickly, repairs <24 hrs, etc.)
  - Regulatory requirements (lifeline, installation/disconnection service requirements)
  - Diffuse consumer base
  - No long-term contracts/month-to-month service
  - High churn (5%-10%/mth)
3. To profitably serve Mass Market, carriers must...
  - Keep costs of customer acquisition low
  - Have reliable, electronic method of service provision
  - Be able to service churn profitably
  - Sell through mass market advertising techniques (ubiquitous coverage with consistent product)



# Essentially No UNE-L Competition in Mass Market

- The BOCs' own "UNE-Fact Report" suggests that CLECs -- *i.e.*, putting aside cable franchises and small ILECs -- currently serve at most 1/10 of 1% of the mass market via UNE-L.
- Of the nine "CLECs" in "Figure 4" of the BOCs's Report that supposedly serve 25,000 or more residential lines, most are either cable overbuilders or ILECs.
- The Act does not require a competitor to buy a cable company or an ILEC in order to compete.
- Moreover, nearly all of the "Figure 4" companies either never sought to serve the mass market or have abandoned plans to do so
- Without proof of actual market success, claims that CLECs simply can "transition" to UNE-Loop to serve Mass Market ring hollow



## Mechanized Provisioning: Essential to Providing Mass Market Services

- Over 139MM analog dialtone lines on Bell/GTE networks – supporting competitive entry requires large quantities
- ILECs serve this market in largely automated manner – they do not do a hot cut each time an analog dialtone customer adds a line or turns up service
- With low revenue/mth, regulatory service quality requirements, and high churn – CLECs *must* be able to have similar automated access to serve these customers profitably
- Project hot cuts do not and cannot solve this fundamental disparity – because still relies on manual provisioning for *all* CLEC lines while ILEC keeps mechanized access

**Loop-port combination of UNE-P is today  
the *only* access method that provides mass  
market entrants like Z-Tel automated,  
nondiscriminatory provisioning**



# The Hot Cut Bottleneck

- No wholesale market of sufficient capacity exists anywhere – let alone with sufficient capacity
- “Hot-cut” capacity limits self-provisioning/UNE-L entry
  - Example: 5% churn per month
  - If ILEC can provide only 15,000 hot cuts per month in a state...  
**maximum Mass Market Penetration for that CLEC is 300,000 lines**
  - *In NY, that would cap a CLEC's entry at 2.3% of the market*
  - Project hot cuts not adequate to serve mass market, as manual provisioning and mass market customers not sign term contracts.
  - “Transition” to UNE-L would require CLEC to enter two businesses simultaneously *and* double-pay for switching while conversion happened
- Mechanized Access through UNE-P *can* support such volumes
  - NY: 250,000 UNE-P conversions in December 1999
  - GA: BellSouth converted 1% of its lines via UNE-P in Summer 2001
  - Over 9MM UNE-P lines in service nationwide today



# Provisioning Cost Barrier

- UNE-L conversions are expensive and manual
  - Manual Provisioning Process; backward-looking multi-step process
  - Verizon and NYPSC: each hot cut costs over \$180!
  - FCC cannot assume that the hot cut rate is lower – nor can it subsidize below-cost hot cuts
- Even if manual hot cuts were available in unlimited quantities, still place material limitation on quality of CLEC product
  - CLEC pay for manual provisioning of every line = cannot compete with Bells who have mechanized access
  - Manual error: to support mass market entry, huge volumes would be required
  - Even an optimistic success rate would still mean putting out of service hundreds of thousands of existing UNE-P customer lines (450,000 if 95% “success”)
- Transport costs and inefficiencies add to UNE-L costs



# Network Impediments to Mass Market Entry

- Z-Tel retail customer densities not sufficient to warrant collocation or transport investment
  - Z-Tel has UNE-P lines in 4207 ILEC central offices
  - In 87% of those COs, Z-Tel has less than 50 lines
  - In 94% of those COs, Z-Tel has less than 100 lines
- Collocation is expensive; ILECs fight efficient arrangements
- ILECs possess switch/transport network density economies because they were bequeathed monopoly by the state
- Even with interoffice density, CLECs cannot match efficiencies in ILEC switch/transport network with only one switch
  - Example: CLEC must pay for interoffice transport of a call **even if** that call originates and terminates at same end office
  - Bells do not incur that cost with switches in each CO



## **For More Information...**

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**The Commission Should Continue to Require Unbundling of Local Switching  
and Other Elements Needed to Serve the Mass Market**

- I. Z-Tel's ability to serve the mass market would be "impaired" without access to the UNE platform within any reasonable meaning of that term in section 251(d)(2)(B).

4. **Impairment Framework:**

- Section 251(d)(2)(B) focuses the Commission's attention on whether the "failure to provide access" to a network element would "impair the ability of the [requesting] carrier . . . to provide the services it seeks to offer."
- Section 251(d)(2)(B) thus indicates that the impairment analysis should be a granular, service-specific inquiry into whether failure to provide the element would reduce CLEC output.
  - The alternative impairment framework proposed by BOCs is inconsistent with the Act because: (1) it rewrites the statute to ignore its express focus on the ability of the requesting carrier to provide the "services it seeks to offer"; and (2) it rewrites the statute to replace "impair" with "essential." Congress chose "impair," which clearly requires a far more limited showing of reduced output than would "essential."
- Focusing on intermodal competition, as urged by the BOCs, would be flatly inconsistent with the Act's emphasis on whether the requesting carrier would be impaired. Congress did not require new entrants to buy a cable operator as a condition of entry.
- But whether Z-Tel would be "impaired" without access to the UNE platform does not turn on what impairment framework is adopted. As set forth below, under any reasonable meaning of the term "impair," the record here mandates a finding of impairment absent access to the UNE platform.

B. **Z-Tel Has Demonstrated Impairment:**

- *The Mass Market is Unique:* The mass market to which Z-Tel seeks to offer services has distinctive characteristics that currently make it nearly impossible to serve that market without unbundled switching and the other elements of the UNE platform. These characteristics include: high churn; low incremental revenue per account; need for headache-free installation and prompt customer service; and unwillingness to enter annual contracts.
- *Hot Cut Costs are Prohibitive in the Mass Market:* The primary costs of self-provisioning switching are not for the switch itself, but for start-up, collocation, maintenance and, most importantly, hot cut costs. Z-Tel's analysis of the New



York market indicated that **even if the switch itself, collocation, and maintenance were free**, it would not be profitable to deploy a switch to serve mass-market customers in New York at a “true” hot cut cost of over \$185 found by the New York Commission.

- *Hot Cut Capacity is Insufficient to Serve the Mass Market:* The ILECs could not possibly perform the millions of hot cuts per month that would be needed in a competitive market. For example, the New York Commission recently found that if Verizon’s current UNE-P orders were converted to UNE-L orders, **Verizon’s hot cut capacity would have to expand by 4400 percent**, which is clearly not going to happen. New York Commission Comments at 4. (In fact, there are statements from the CWA in New York that Verizon is instead cutting back its hot cut capacity.) At current conversion rates and capacity, the New York Commission said that “it would take Verizon **over 11 years** to switch all existing UNE-P customers to UNE-L.” *Id.* And that would not account for adding new customers, or churn. Rather than seriously addressing the capacity issue in its Reply, Verizon baldly asserts that it is not a problem.
- *Hot Cut Reliability Remains Problematic in the Mass Market:* The BOCs tout problem-free hot cut performance 90+ percent of the time – but it is extremely difficult to build a mass-market customer base when there *any* significant chance of losing phone service. These errors occur in bulk, or “project” hot cuts as well – because they still ultimately rely upon manual provisioning. **Unlike business customers, mass market customers cannot save enough to justify the possibility of losing service.**

C. **The BOCs’ “UNE-Fact Report” Supports Z-Tel’s Arguments:**

- *The BOCs’ Report Suggests that Competitive Carriers Currently Serve, at Most, About 1/10 of 1% of the Mass Market via UNE-L:* “Figure 4” of the “Fact” Report shows that – putting aside cable franchises – the BOCs were able to find only nine companies that purportedly serve 25,000 or more residential lines. But the vast majority of those lines are **not served via UNE-L**. The “Figure 4” companies are primarily either ILECs or cable overbuilders – and no one seriously thinks that the Act is only about enabling competition by such companies. And even among those companies, **most either never sought to serve the mass market, or have abandoned plans to do so.**
- *The BOCs’ Latest List of CLEC-Deployed Switches:* The BOCs’ list of CLEC switches is entirely dominated by companies that obviously do not use their switches to provide services to the mass market via UNE-L. Instead, they primarily serve medium-sized and large business customers, for whom it makes economic sense to aggregate loops at the customer’s premises and provide service at a DS1 interface or higher. **This avoids the need for manual analog hot cuts at the ILECs’ central office to serve these customers.** (Large businesses with intensive bandwidth needs are a different market than the mass market – they will

agree to sign long-term contracts and can tolerate some degree of manual installation.) Z-Tel (like other commenters) estimates that aggregation may become economically viable at about 16-20 lines.

**D. Z-Tel's Impairment Arguments are Fully Consistent With USTA v. FCC:**

- *Z-Tel has Urged that Impairment Analysis Should be Market-Specific:* USTA faulted the Commission for adopting impairment rules of "unvarying scope." Z-Tel wholeheartedly agrees with the D.C. Circuit's view that the large business and mass markets should be distinguished and analyzed separately.
- *Cost Disparities:* USTA cautioned that impairment cannot properly be based on "cost disparities" that would be "faced by virtually any new entrant in any sector of the economy." But the **hot cut (and related) costs giving rise to impairment for CLECs seeking to serve the mass market are unique to that market** – Z-Tel is not aware of *any* other industry where new entrants must pay established monopolists for the privilege of attracting the monopolists' customers.
- *Verizon:* The Commission must be cautious not to over-read USTA. Verizon expressly indicated that the Act is intended to promote broad unbundling to give "aspiring competitors every possible incentive to enter local" markets and overcome the monopolists historical advantage. Accordingly, *dicta* in USTA to the effect that the Commission should limit unbundling to facilities with natural monopoly characteristics must be viewed with skepticism, particularly since the Commission's next order will not necessarily be reviewed in the D.C. Circuit.

**II. The Commission should continue to recognize state authority to establish additional unbundling requirements.**

- *Plain Language:* Section 251(d)(3) expressly provides that the FCC "shall not preclude the enforcement of any regulation, order, or policy of a state commission that . . . establishes access and interconnection obligations of local exchange carriers." When the Commission tried, in 1996, to construe this language to prohibit state unbundling rules that were inconsistent with the Commission's regulations, the Eighth Circuit reversed. The court held that section 251(d)(3) was meant "to shield state access and interconnection orders from FCC preemption." *Iowa Utilities Board*, 120 F.3d at 807.
- *States are Better Able to Undertake the Required Granular Analysis:* As NARUC's comments noted, "[s]tate regulators have access to the detailed real-world information that is essential" to determining what UNEs should be unbundled in particular markets. NARUC Comments at 7. State regulators are able to employ **fact-finding procedures**, including detailed discovery, live testimony, and cross-examination, that are not generally available to the FCC. *Id*

- *State commissions support the UNE platform for mass market consumers:* Those states that have undertaken detailed analysis of the need for UNE-P have generally endorsed state-wide unbundling of the UNE platform for the mass market. New York and Texas, in particular, correctly emphasized hot cut bottleneck problem in reaching that conclusion.

III. The section 271 checklist requires the BOCs to unbundle loops, transport, and switching, and there is no basis for forbearance from its requirements at this time.

A. Section 271

- *Plain Language:* The second item on the checklist requires BOCs to provide “[n]ondiscriminatory access to network elements” in accordance with sections 251(c)(3) and 252(d)(1). Items four through six of section 271 require that “loop transmission,” “transport,” and “switching” be provided on an “unbundled” basis. The two provisions thus plainly require that the BOCs provide unbundled access to loops, transport, and switching at cost-based rates and in accordance with the other provisions governing interconnection agreements.
  - There is absolutely **no textual support** for Verizon’s contention that loops, transport, and switching suddenly cease to be “network elements” if the Commission finds that they need not be unbundled under section 251(d)(2).
- *The Problem of “Surplusage”:* Construing the checklist as the BOCs advocate to require only what section 251(d)(2) requires would violate a “cardinal principle” of statutory construction – it **would render the checklist items mere “surplusage.”** The checklist items have meaning only if BOCs are required to unbundle those elements even *after* those items are not required to be unbundled pursuant to the standards of section 251.
- *The Commission’s Prior Construction of Section 271:* In the *UNE Remand Order*, the Commission expressly construed section 271(c)(2)(B) to “require[] BOCs to . . . provid[e] . . . to requesting carriers the following network elements: local loops, transport, switching, databases and signaling.” 15 FCC at 3905. Agreeing with the BOCs now that section 271 does not require unbundling independent of that mandated by section 251 would oblige the Commission to repudiate its earlier interpretation of section 271.
- *Maintaining Unbundled Switching and the Other Elements of the UNE-P Necessary to Serve the Mass Market Would Serve the Core Purposes of the Act*
  - *Congress Intended the Act Is to Eliminate the Local Monopoly:* According to the Supreme Court, the Act was intended to introduce competition to “persistently monopolistic local markets, which were

thought to be the root of natural monopoly in the telecommunications industry.” *Verizon*, 122 S. Ct. at 1654. The act was “designed to give aspiring competitors every possible incentive to enter local retail telephone markets, short of confiscating the incumbents’ property.” *Id.* at 1661.

- There is absolutely no statutory basis for Verizon’s view that Congress intended competition using leased network elements to be just a short-term, transitional measure. Both the *AT&T* and *Verizon* cases indicate that Congress intended UNE-based competition to be one of three equally important modes of competitive entry
- *Congress Intended Parity Between Local and Long Distance Entry*: Congress expressly envisioned that “[w]hen we open local service exchanges to competition, then the Bell operating systems will [be able to] go out and compete in the long distance market.” 141 Cong. Rec. S8,135 (Sen. Dorgan). As Senator Breaux put it, “You can get in my business when I can get in your business.” 141 Cong. Rec. S8,153. BOCs can now “get in” the long distance business (once they receive section 271 authorization) by simply leasing interexchange capacity and paying less than \$5 per customer to switch the customer electronically to its service. In contrast, for a CLEC like Z-Tel to “get in” the local market via UNE-L (as the BOCs would require), the CLEC must pay tens or even hundreds of dollars per customer in hot cut costs. Because that is simply not a viable entry strategy, under the BOCs’ approach, no “parity” would exist.
- *Congress Intended that the BOCs Must Provide Loops, Transport, and Switching for the “Reasonably Foreseeable Future”*: Congress knew that local competition would not develop overnight. Senator Pressler, the sponsor of the Senate Bill, explained that the checklist would require the BOCs to continue to unbundle the three core elements for the “reasonably foreseeable future.” 141 Cong. Rec. S8,469 (Sen. Pressler).

**B. No Justification for Forbearance**

- *Verizon’s Petition is Premature*: So long as the BOCs are required to unbundle loops, transport, and switching under section 251(d)(2), the question of “forbearance” from 271 does not arise. The Commission should require Verizon to refile after issuance of a Triennial Review decision, to **avoid wasting everyone’s time now**.
- *Verizon’s Forbearance Argument Just Repeats its Erroneous Statutory Interpretation*: Verizon’s “forbearance” argument essentially ignores the requirements of section 10. Verizon’s entire “forbearance” argument rests on its

assertion that the section 271 checklist adds nothing to the requirements of section 251(d)(2). That argument would render the checklist mere "surplusage."

- *The Anti-Backsliding Provision:* Section 271(d)(6) provides for a range of penalties "if the Commission determines that a Bell operating company has ceased to meet any of the conditions required for [section 271] approval." Accordingly, it is clear that section 271 is not "fully implemented" simply because the checklist has been initially satisfied. Section 271 imposes continuing obligations.
- *Constitutional Issues:* "Forbearing" from enforcing section 271 would raise serious questions about the Commission's section 10 authority. The forbearance provision represents an unprecedented delegation from Congress to the Commission of authority to repeal portions of the Act. The Supreme Court has held that the President may not constitutionally be authorized to repeal portions of an Act, *see Clinton v. City of New York*, 524 U.S. at 439, and neither may the Commission.
- *Unbundling Should be Maintained Until There are Alternative Sources of Supply:* Contrary to the BOCs arguments, Z-Tel does not urge that the UNE platform should be preserved in perpetuity. The key question, though, is: "What must occur before a CLEC like Z-Tel could viably serve the mass market, in the absence of the platform?" The answer is clear: Z-Tel would need to be able to get the elements of the platform from someone other than the current monopolists - *i.e.*, **from a fully-functional wholesale market** that can provide seamless conversions at sufficient capacity to meet demand. That is the situation today for the BOCs in the long-distance market, where they lease wholesale capacity.

## WHERE UNE-P IMPLEMENTED, CONSUMERS BENEFIT STATEWIDE

*With manually-provisioned UNE Loops, competition is scant and concentrated*

The ability to provision orders electronically and ubiquitously allows competitors to utilize UNE-P to offer mass market residential and small business consumers a competitive choice today. The data below, obtained from SBC and BellSouth through discovery in state proceedings and aggregated here, clearly shows that UNE-P provides **geographically ubiquitous** competitive mass-market coverage. Other forms of entry – notably UNE Loop – are not ubiquitous. Because of this potential ubiquitous competitive response, it is no surprise, then, that State regulators have implemented UNE-P under state law as part of retail price cap regulation of ILECs.

### Where's the Competition in Texas?

#### Local Entry By Size of SBC Central Office (Oct 2001)

Wire Center Ranking	Average Lines/CO	Competitive Penetration	
		UNE-L	UNE-P
The 10% Largest Wire Centers	102,571	2%	8%
Next 10%	54,443	1%	11%
Next 10%	34,139	1%	12%
Next 10%	20,331	0%	13%
Next 10%	12,309	0%	16%
Next 10%	7,218	0%	17%
Next 10%	4,265	0%	18%
Next 10%	2,532	0%	21%
Next 10%	1,373	0%	25%
Smallest 10% Wire Centers	485	0%	21%

### Where's the Competition in Georgia?

#### Local Entry By Size of BellSouth Central Office (2002)

Wire Center Ranking	Average Lines/CO	Competitive Penetration	
		UNE-L	UNE-P
The 25 Largest Wire Centers	67,977	3%	6%
Next 25 Largest Wire Centers	40,012	2%	9%
Next 25 Largest Wire Centers	26,616	1%	8%
Next 25 Largest Wire Centers	13,542	0%	8%
Next 25 Largest Wire Centers	6,943	0%	6%
Next 25 Largest Wire Centers	3,875	0%	7%
Smallest 28 Wire Centers	1,697	0%	6%

# Papers on Local Telecommunications Competition and Policy

## Papers on Local Exchange Competition and Policy

All of these papers can be downloaded at either [www.telepolicy.com](http://www.telepolicy.com) or [www.phoenix-center.org](http://www.phoenix-center.org).

Why ADCO? Why Now? An Economic Exploration of Industry Structure for the "Last Mile" in Local Telecommunications Markets, Randy Beard, George Ford, and Larry Spiwak (published in the *Federal Communications Bar Journal*, 2002).

This paper explains why the "transition to facilities" argument is meritless. The supply-side economics of local telecommunications prohibits a large number of facilities-based competitors. This is not true (to the same degree) on the retail side. Much like the current long-distance markets, where about 900 retailers are serviced over about 7 nationwide fiber networks, industry structure in the local market must bifurcate into a retail and wholesale segment for real competition to exist. Unbundling allows CLECs to acquire market share, which then serves as a non-ILEC demand for local exchange network. Without unbundling, there is not demand for alternative networks - consumers don't demand network, carriers do. Without available and effective demand, the costs of constructing local network can never be recovered - as is evident in the collapse of the segment of CLEC industry which adopted a "built it and they will come" business plan. The prudent path, made possible by unbundling, to "build it after they come."

Facilities-Based Entry in Local Telecommunications: An Empirical Investigation, Randy Beard, George Ford, and Tom Koutsy.

This paper shows, using econometrics, that the deployment of end-office switching by CLECs is not attenuated in markets where unbundled switching prices are low. Instead, CLEC deployment of switches is actually higher in markets with low switching rates. A theoretical model explains the possible relationships between deployment and unbundling, and the theory provides no unambiguous conclusions (low switching rates may increase or decrease CLEC switch deployment). Thus, the issue is plainly empirical. The empirics show that low switching rates increase deployment. In markets where access to unbundled switching is restricted, there are fewer CLEC switches deployed.

Make-or-Buy? Unbundled Elements as Substitutes for Competitive Facilities in the Local Exchange Network, Randy Beard (Auburn University) and George Ford, PHOENIX CENTER POLICY PAPER NO. 14 (September 2002).

The amount of CLEC entry using unbundled elements is highly sensitive to the price for such elements. A 10% increase in the price of an unbundled loop or switching reduces CLEC lines by more than 10% (i.e., the demand for UNEs is *elastic*). The cross-price elasticity between loops purchased with and without switching is zero. Thus, UNE-Platform does not reduce the demand for UNE-Loop (as the BOCs claim). From an antitrust perspective, the findings in this paper indicate that UNE-Loop and UNE-Platform service different markets. The paper also includes a statistical test of impairment with respect to switching, and finds that impairment exists.

A Fox in the Hen House: An Evaluation of Bell Company Proposals to Eliminate their Monopoly Position in Local Telecommunications Markets, PHOENIX CENTER POLICY PAPER NO. 15 (September 2002).



Between UNE-P, UNE-L, and full facilities-based entry, the BOCs' revenues are greatest with UNE-P. The other forms of entry leave BOC network stranded. Why then, do the BOCs prefer facilities-based competition? The answer is obvious. While the BOCs may lose more profit on a per-line basis from facilities-based entry, there is considerably less of it. By slowing competitive growth to a trickle, the total loss in margin is trivial. UNE-P, alternately, allows for the rapid growth of competition, and while BOC margin loss is less, the total margin loss is greater.

What Determines Wholesale Prices for Network Elements in Telephony? An Econometric Evaluation, George Ford and Randy Beard (Auburn University), PHOENIX CENTER POLICY PAPER NO. 16 (September 2002).

The BOCs' claim that state commissions have failed to base element rates on forward-looking cost (as required by the FCC's TELRIC standard) is evaluated econometrically. In contrast to the BOCs' assertions, forward-looking economic cost is the primary determinant of wholesale prices for network elements. Retail prices play no direct role in determining wholesale prices for UNEs. However, the state commissions have, according to the statistical model, set wholesale prices above forward-looking costs to provide the BOCs about half of their existing retail margins. While so, forward-looking costs are, by far, the more important determinant of wholesale prices for UNEs. Mr. Seidenberg was wrong – the state commissions 'do get it.'

Unbundling and Facilities-Based Entry by CLECs: Two Empirical Tests, by George S. Ford, Ph.D. and Michael D. Pelcovits, Ph.D. (former MCI Chief Economist, now with the consulting firm MICRA).

The number of lines served on CLEC-only facilities (i.e., pure facilities based) is positively related to market size and market density, and negatively related to the price of unbundled loops and unbundled switching. In an alternative test, the authors find that RCN's entry is negatively related to the price of unbundled loops. Thus, there is no evidence that there is more facilities-based entry where UNE rates are higher. In fact, the opposite is true.

Preliminary Evidence on the Demand for Unbundled Elements, Robert Ekelund, Jr. and George Ford (forthcoming in *Atlantic Economic Journal*, December 2002).

This paper estimates the demand elasticity for UNE-Platform. The paper finds that a 10% increase in the price of UNE-P elements reduces quantity of UNE-P sold by 27%. Thus, it is little surprise that the BOCs are now attacking the price of UNE-P elements, as well as availability.

Innovation, Investment, and Unbundling: An Empirical Update, Robert B. Ekelund, Jr. and George Ford (forthcoming in the *Yale Journal on Regulation*, Spring 2003).

In an article in the *Yale Journal on Regulation*, Bell advocates Thomas Jorde, Gregory Sidak, and David Teece (JST) commented on some potential economic consequences of the Telecommunications Act of 1996 as implemented by the Federal Communications Commission, and offered one interesting and testable proposition. Specifically, JST propose that mandatory unbundling increases the riskiness and cyclicity of the ILEC's [Incumbent Local Exchange Carriers] economic performance and, hence, on the ILEC's weighted-average cost of capital. This hypothesis is tested empirically using standard procedures. We find no evidence supporting the hypothesis of JST regarding the ILECs' cost of equity capital.

# Why ADCo? Why Now? An Economic Exploration into the Future of Industry Structure for the "Last Mile" in Local Telecommunications Markets

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## I. INTRODUCTION

It is now more than five years since the passage of the landmark Telecommunications Act of 1996 (1996 Act), but instead of flourishing competition, the competitive local carrier sector has experienced a financial

1. T. Randolph Beard et al., *Why ADCo? Why Now? An Economic Exploration into the Future of Industry Structure for the "Last Mile" in Local Telecommunications Markets* (Phoenix Ctr. Policy Paper No. 12, Nov. 2001), available at <http://www.phoenixcenter.org/papers/CPL12.pdf>.

Basically, the issue can be narrowed to several fundamental misconceptions about the underlying economics of the telecommunications policy makers, and would-be entrepreneurs. Namely, it appeared that everybody believed that: (a) entry into the local market would be relatively inexpensive; (b) the market immediately would be capable of sustaining multiple local access networks; and (c) as a result of their desire to enter the long-distance business, incumbents would gladly embrace competitive entry.

As this paper will discuss, however, (a) entry into the local sector is an extremely expensive business, requiring firms to incur huge sunk costs and achieve scale economies quickly; (b) under current and foreseeable market conditions, local markets will only be able to sustain a few "last-mile" access networks (i.e., high concentrations) and (c) incumbents were prepared to—and in fact did—go to great lengths in order to deter entry.

As such, just as it was prior to 1996, one of the key unresolved issues in telecommunications restructuring continues to be the proverbial "last mile"—that is, the last segment of the network necessary to connect the customer.<sup>1</sup> Indeed, despite the somewhat regular deployment of state-of-the-art national and regional long-haul networks and metropolitan fiber rings by a number of carriers, the deployment of alternative networks comes to a screeching halt when it reaches into the local exchange, leaving dominant control of most switching and transport facilities, and particularly

1. For example, according to Webmaster.com at least 750 Internet companies folded from January 2000 through December 2001. Moreover, in 2001 alone, 113 Internet service providers went out of business (up from 13 the all of 2000), and 207 access providers were shut of business (up from 19 the all of 2000). For *Find Statistics* site: <http://www.webmaster.com/Statistics/Find/Statistics.asp> (last visited Jan. 22, 2002). Unfortunately, however, it does not look like things are going to improve any time soon. See, e.g., Ann Davis, *Spikes From Companies Find Impediments And Call For Changes*, *WALL ST. J. BUREAU*, (Oct. 1, 2001), at 24.

2. See, e.g., *Altogether, Public Utilities And Help The Process Elsewhere*, *See Generally* Mark Martin & Lawrence J. Sprague, *The Telecommunications Trade War: The Liberal States, The European Union And The World Trade Organization* (2000). Whether there will be any significant improvements remains to be seen. See, e.g., Peter S. Jacobson, *FCC Seeking New Approach*, *WALL ST. J. BUREAU*, May 3, 2001, at D1, D9.

3. While the "last mile" of the local exchange network is perhaps the most challenging trial for competition policy, the supply-side economics of many other components of the competition, including switching and transport, also present large numbers.

4. The "last mile" is a term of reference and is not meant to describe a "measured mile." Indeed, the "last mile" can be as small as a few feet or yards.

the "last mile" or "last yard" of the local exchange network, to the incumbent local exchange carrier ("ILEC"),<sup>2</sup> in order to bypass the economic bottleneck for local access, the competitive local exchange carrier ("CLEC").<sup>3</sup> Industry has been faced with the core question of transaction cost economics: is it more efficient to buy local access via unbundling, special access, and so forth from the reluctant incumbent, and conduct their transactions in the market, or build their own local access network from scratch, and bring the transaction out of the market and into the firm?<sup>4</sup> Unfortunately, the problem is that under current and foreseeable market conditions, neither option is particularly economically appealing.

On the one hand, given the incumbents' near-complete dominance of the local access market, there really is no competitive "market" where a firm can purchase local access at just and reasonable rates that will be provisioned on a timely basis. Acquiring needed inputs (i.e., elements) from the incumbents at just and reasonable rates and provisioning intervals is no cake walk either. After all, dominant firms do not typically facilitate the demise of their dominance. This is not an irrational concept, because no firm will ever be enthusiastic about consciously giving up its own self-interest by selling its rights to its key input of production (i.e., inputs).<sup>5</sup> Indeed, while the 1996 Act requires the ILECs to provide such elements, the Act did little to fundamentally alter economic incentives.<sup>6</sup> So long as this inherent wholesale-supplier-retailer conflict exists between no ILEC and a CLEC, then the ILECs' ability to manipulate prices for

1. See, e.g., Rebecca Himmelfarb, *Telecom Act Hasn't Delivered Promised Price Relief*, *WALL ST. J.*, May 3, 2001, at D1, D4.

2. See, e.g., Guy E. Williams, *The Economic Institutions of Capitalism* (Free Press 1985).

3. But cf. Eric Heston, *FCC Targets Mid-December for Start of UNE Kevlar*, *CRIM* (Nov. 30, 2001), at 3 (quoting FCC Chairman Carter Loomis' Chief Deputy Telecommunications Service ("ALTS")). According to Heston, "no one disputes" Heston's conclusion (against the KLEC) "wholesale providers" but the legal question is when to call it. . . . for ILECs and CLECs to try to work together to resolve disputes over UNE provisioning before they are forced to FFC or state regulators. When [and] under of competitive business described to FFC or state regulators. When [and] under of competitive business couldn't have out their monopoly requirement to that appeared to be an official cooperative move. "I think it's in the interests of incumbents to be an official wholesaler," she said.

4. Unfortunately, the collapse of many CLECs in the current financial collapse is that it was not unreasonable for them to base a business plan on a federal law, enacted by Congress, signed by the president, and upheld as constitutional by the courts, that guarantees them the right to unbundled network elements. While this may be true, this is a legal argument, not an economic one.

elementary and to control quality leaves sufficient room for LLCs to sabotage transactions, defined as the ability to increase the cost of a rival's key input of production by unpriced behavior between itself and CLBCs.<sup>11</sup>

(On the other hand, as the relative paucity of alternative local networks and rampant bankruptcy in the CLBC industry demonstrates, the economies of self-supply are not particularly compelling either. As explained below, telecommunications is an extremely expensive business, and many CLBCs are discovering to their dismay and chagrin that they cannot achieve sufficient economies of scale, scope, or density to warrant the capital required to build various components, even relatively small components, of the local exchange network from the ground up. The large sunk costs required to construct local exchange networks greatly increase the risk of entry and severely limit the number of financially viable alternative "last-mile" networks in most local markets.<sup>12</sup> Simply put, the supply-side economies of the local exchange market prohibit competition among large numbers of network-based firms. The hope for large numbers competition among network-based firms under current and foreseeable market conditions is sheer fantasy.

Accordingly, the relationship between a reluctant wholesale LLC supplier and its retail competitor-consumer CLBC, as well as the local exchange market, suggests that neither of the two alternatives for facilitating competition offer substantial promise as a long-term solution to monopoly in the local exchange marketplace. So, what to do? How do we go from "one" firm to "many" firms in an economically efficient manner—the *raison d'être* of market "restructuring"? This Article will explore the

11. The definition of the term "sabotage" antedated upon original in T. Randolph Reed et al., *Regulation, Vertical Integration and Sabotage*, 49 J. Law & Econ. 319 (2001), and will be used pasteur, for a full explanation of the sabotage concept, see Section IV.)

12. Limitations on the number of viable firms are not restricted to the "last mile." Rather, any segment of the network characterized by sunk costs and scale economies has limited opportunities for successful entry. For a thorough discussion of the effects of sunk costs on entry and industry structure, see John Sutton, *Sunk Costs and Market Structures: Price Competition, Aversion, and the Evolution of Concentration* (1991). For a similar analysis applied to the communications industries, see Jerry B. Duvall & George S. Ford, *Changing Industry Structure: The Economics of Entry and Price Competition* (Brookings Papers on Economic Activity, 1991), available at [http://www.brookings.edu/papers/1991/01/01\\_duvall\\_ford](http://www.brookings.edu/papers/1991/01/01_duvall_ford).

13. Federal Communications Commission Chairman Michael K. Powell, Address at the National Summit on Broadband and Deployment (Oct. 25, 2001), available at <http://ftp.fcc.gov/SpecInfo/Tel/2001/tel01101b.html>; Ivan Solodov, Address at the Goldman Sachs Conference X (Conference (Oct. 4, 2001) at <http://www.networkworld.com/news/index.cfm?ContentID=2001104>).

merits of an unimpeded market-based third option for local access: the alternative distribution company ("ADC"), which essentially is a wholesale "carriers' carrier" for local network "last-mile" access.

The "carriers' carrier" is not a new concept to telecommunications. Many long-haul networks, both national and regional, are built and/or operated as a "carriers' carrier." The economic forces that create a wholesale market in the long-distance industry, where about six nationwide and numerous regional networks support well over 500 retailers, are no less present in the local exchange. Indeed, those economic forces—economies of scale, economies of density, and sunk costs—are even more important in the local exchange than in long-distance, where fiber deployment in metropolitan markets is about twelve times as expensive as long-haul fiber networks.<sup>14</sup> As such, the case for a "carriers' carrier" in the local exchange market at this stage of the telecommunications industry restructuring process is compelling.

More importantly, given its wholesale entry strategy, the ADC provides for new entrants a viable economic solution to the problems raised by the inherent incentive of an incumbent entity to discriminate in profit its profits. This issue of incentives is key to understanding the current ill of the market, as it is now clear that policymakers significantly underestimated the significant incentives of the incumbents to unduly discriminate against their rivals, not to mention also understating the entry costs of the local market. In fact, it is becoming readily apparent that, given the current and foreseeable underlying economics of the industry, no amount of regulation—with perhaps the exception of total structural separation—can ever fully mitigate the cross-incentives of the incumbents' wholesale-supplier/retail-competitor relationships with CLBCs.

To explore the merits of the ADC in detail, this Article, using an analysis first set forth in Phoenix Center Policy Paper No. 10,<sup>15</sup> will briefly

14. An "ADC" is a very different concept from a "carrier." A "carrier" is licensed by the Federal Communications Commission (FCC) to provide local access facilities from the incumbent's existing network. See, e.g., Roy L. Harnett, *A Proposed "Reverse Telephone Competition: The Local Loop"*, available at <http://www.fcc.gov/record/correspondence/royharnett> (Jan. 22, 2002); Kevin Sullivan, *Loop Co. Is the Only Game in Town, CNAW*, *WEEKLY* (Jan. 16, 2001), available at <http://www.fcc.gov/record/correspondence/kevinsullivan> (Jan. 16, 2001). An ADC, however, is the entry of a completely new firm that competes as an exclusive wholesale entry strategy for local access from the outside.

15. See *Trends in Telephone Service: Industry Analysis* (Division, FCC Common Carrier Bureau, 10-12 10-16 (2000)), available at [http://www.fcc.gov/Bureaus/Common\\_Carrier/Reports\\_Files/CC-Stats\\_Link1/ADTrends2000.pdf](http://www.fcc.gov/Bureaus/Common_Carrier/Reports_Files/CC-Stats_Link1/ADTrends2000.pdf).

16. Dan Swenson, *City of Lights - The Pricing of Fiber Build-outs: A Special Report*, *Communications Lawyer*, Aug. 1, 2001, at 47.

17. See Policy Paper No. 10, *supra* note 12.

explain that given the underlying economics of the market, and that much of the entry costs of a telecommunications network are sunk, industry concentration in telecommunications markets is expected to be relatively high." Accordingly, expecting a large number of competitors in local access markets—particularly a large number of network-based competitors—is entirely unreasonable.

Second, this Article will evaluate in a summary fashion the two primary forms of entry observed since the passage of the 1996 Act.

#### Option 1:

Element-(dependent) Entry ("EDE"). An entry strategy where the new entrant relies heavily on the elements of a relevant incumbent, rather than build its own network, and purchases local access from the incumbent via special access lines, high-capacity circuits (T1's), full resale, individual unbundled network elements ("UNNE"), or even the entire UNNE platform ("UNNE-P"—a combination of the local loop, unbundled switching, and transport elements). This form of entry includes those entrants relying on the elements of the incumbent until their own networks are deployed (i.e., a "small-build" strategy). As these firms must also sink huge amounts of capital in equipment to enter, however, these firms are certainly "facilities-based" entrants, albeit not "network-dependent" entrants as discussed in the next paragraph.

#### Option 2:

Network-Based Entry ("NBE"). A strategy where a CLEC seeks to build its own local access network from scratch, with little or no reliance on the incumbent's network.

Third, this Article will explore the full impact of the incumbents' incentive to frustrate competitive entry by selling forth a simple economic model that analyzes the incentives of a vertically integrated supplier—one

18. See also T. Randolph Beard & George S. Ford, *Competition in Local and Long Distance Telecommunications Markets*, in *The International Symposium on Telecommunications Economics* (Gary Badden & Scott I. Savage eds., forthcoming 2002).
19. Given the geographic specificity of a telecommunications plan, it is possible for many firms to produce telecommunications services. However, very few firms actually will compete in the same geographic area. For example, there are many cable television firms but nearly every cable system is a monopoly.

that operates in both the upstream wholesale market and in the downstream retail market—to provide inputs of production in actual or potential competition. For consistency with the reality of building a local exchange plan, this model assumes that there are economies of scale or density in the downstream retail market. Also assumed for modeling purposes is that services are profitably supplied. As the model reveals, the incentives to supply the "upstream" or "wholesale" market or cost-based prices, thus facilitating competition in the "downstream" or "retail" market, are inversely related to the market share of the firm in the retail market. In fact, this model illustrates that there is a fundamental tension between the benefits of large scale, wholesale operation, and the disincentives that firms with large retail operations have to "share" those wholesale benefits with retail competitors through the efficient sales of network facilities.

Finally, this Article uses the model to compare the incentives of the vertically integrated suppliers to those of wholesale-only suppliers (AECOs). As explained below, given the existence of the LLCs' discriminatory incentives resulting from the current and foreseeable economic conditions of the U.S. telecommunications industry, the model suggests that the most probable and viable long-term, competitive market structure involves a substantial presence by an unintegrated, but largely wholesale supplier—in other words, an LLC—in function efficiently. Accordingly, their presence in the market should be welcomed and encouraged.

#### II. BASIC ISSUES OF INDUSTRY STRUCTURE AND ENTRY

##### A. Introduction

Elementary economic analysis can shed considerable light on the long-run structure of the U.S. telecommunications industry, an issue of

20. This model assumes that either economies of scale or density exist, but the form of economies of scale is used throughout this paper. "Economies of density" describes the relationship between costs and output for a fixed size. Other industry of relationship of costs and output is consistent with the analysis of this paper.
21. By "large" we mean large enough to achieve sufficient economies of scale for the market being served. While our focus is generally on the last mile or last yard, economies of scale can be substantial in other areas. For example, the systems and electronic interfaces required for a CLEC to transport successfully with an LLC may be subject to scale economies. If true, then this "provisioning" interface may be best provided on a wholesale basis.

enormous importance. The role of competition policy is to create an environment in which feasible long-term arrangements—those that are consistent with robust, commercially successful local competition—can take place. One example of such analysis is provided in *Changing Industry Structure: The Economics of Entry and Price Competition*.<sup>21</sup> In this policy paper, Drs. Duval and Ford show that the equilibrium level of concentration in telecommunications markets will be relatively high. The presence of sunk costs, in any industry, limits the number of firms that can profitably serve a market. The larger sunk costs are relative to market size, the higher the equilibrium level of concentration.

More formally, Duval and Ford show theoretically that the equilibrium number of firms in a market ( $N^*$ ) is the integer part of

$$N^* = \left\lfloor \frac{K}{\phi \Delta} \right\rfloor \quad (1)$$

where  $\phi$  is an index of the intensity of price competition ( $\phi \geq 0$ , where  $\phi = 0$  for Bertrand, or highly intense, price competition, and  $\phi = 1$  for Cournot competition in quantities).  $K$  is market size,  $K$  measures the sunk cost, and  $1/\Delta$  is the equilibrium level of industry concentration and is equal to the Herfindahl-Hirschman Index ("HHI") under the assumption of identical firms.<sup>22</sup> Put simply, the number of firms supplying a market is positively related to the size of the market ( $M$ ), but inversely related to the intensity of price competition ( $\phi$ ) and the sunk costs of entry ( $K$ ). The larger are fixed/sunk costs, other things constant, the lower the firms that can profitably supply the market and the higher is equilibrium industry concentration. Likewise, the more intense the price competition, the higher the industry concentration.<sup>23</sup>

22. Policy Paper No. 10, *supra* note 17.

23. The model assumes all firms are identical. The HHI, the sum of the squared market shares of relevant firms, is a commonly used measure of industry concentration. Generally, price competition is expected to be weaker in highly concentrated markets. When entry requires sunk costs, however, this expectation can be invalid.

24. According to RCN's 10-Q Form, about 12% of RCN's phone customers are "off-net," supplied over the TLEC's network, via resale. RCN's 2001 Third Quarter Form 10-Q (Nov. 9, 2001), available at <http://www.rcn.com/investor/index.html>.

plant and passes about 1.5 million homes, or 1.1 million marketable homes.<sup>24</sup> Plant investment runs about \$1,750 per home passed, \$2,500 per marketable home, or about \$6,500 per customer.<sup>25</sup> A rough estimate of RCN's monthly plant costs (assuming a 15% hurdle rate and 15-year payoff) is about \$25 per home passed (assuming average monthly revenue per subscriber is about \$130 and direct costs are about 46% of revenue, implying a gross monthly margin of about \$68 per subscriber. In order to cover plant costs with its net revenues, RCN needs a penetration rate of about 35% to 40%, and that is in the more densely populated markets targeted by RCN over a network capable of generating services worth \$130 per subscriber. Notably, if a 35% to 40% penetration rate is required for profitability, then only two firms can profitably serve the same market, and RCN and the incumbent make new.<sup>26</sup> To construct an RCN-style network for every household in the United States, the plant investment and total entry costs would be about \$300 billion and \$600 billion, respectively.<sup>27</sup> Clearly, network-based entry is incredibly costly and is not something that is replicable by numerous firms in the same market.

Similarly, the metropolitan fiber rings and spurs needed to provide service to large businesses are incredibly costly as well. Some fiber companies estimate that fiber deployment in a metropolitan area routinely costs \$3 million per mile.<sup>28</sup> Thus, construction of a large metro ring or mesh could easily exceed \$100 million.<sup>29</sup> Further, most if not all of these costs are sunk; roughly half of the costs of metropolitan fiber are installation expenses.<sup>30</sup> The services provided over metropolitan fiber networks vary, as

26. RCN Corp. 2000 Annual Report (2001), available at <http://www.rcn.com/investor/index.html>. Marketable homes are those homes that RCN's network can immediately serve.

27. Values are based on RCN's 1998, 1999, and 2000 Annual Reports. For example, between 1999 and 2000, RCN's Plant and Property grew by \$1.5 billion while its marketable homes grew by about \$30,000. In 1999, RCN's penetration rate into marketable homes was about 6%. *Id.* see also RCN Corp. 1999 Annual Report (2000), available at <http://www.rcn.com/investor/index.html>; RCN Corp. 1998 Annual Report (1999), available at <http://www.rcn.com/investor/index.html>.

28. With a reasonable guess of the minimum penetration a firm needs to cover its costs, the number of firms that can operate in a market is the integer part of the inverse of the minimum penetration (e.g.,  $1/0.40 = 2.5$ ).

29. These investment estimates are rough. Plant investment is estimated by assuming the cost differentials and population distributions across density zones are similar to those estimated by the LVA Model (v. 1.2.2), a local element long-run behavioral cost model developed by IMA and Associates, AT&T, and MCI. WorldCom, RCN's current network is assumed to be deployed in the two most dense zones. Metropolitan entry costs are assumed to be about \$1 for every \$1 of plant (see Table 1 *supra*).

30. The costs of any particular installation vary widely. See Swenson, *supra* note 10.

31. *Id.* at 6.

32. *Id.* at 7, 9.

do the size and scope of these networks. Thus, simple profitability models like the RCR example are difficult to construct. However, the fact that less than 10% of buildings have fiber drops suggests that the sunk costs in the network are sizeable relative to market size.

The implication of the economic theory is clear: the number of firms supplying a market is not unbounded when there are sunk costs. Given that much of the entry cost of a telecommunications network is sunk and large relative to market size, industry concentration in telecommunications markets is expected to be relatively high—in other words, there will be few firms in the market. Indeed, until recently, the presumption was that the local exchange market was a natural monopoly (i.e.,  $N \approx 1$ ). While the technology and law governing the telecommunications industry has changed, these changes have not totally altered the supply-side economics of the industry. Large numbers competition among network-based local exchange carriers is forbidden by the supply-side economics of the industry.

#### B. Sunk Costs and the Necessity of Achieving Sufficient Economics of Scale and Scope

The fact that economies of scale (or density) and sunk costs play a key role in telecommunications network deployment goes without saying. In order to achieve profitability in a reasonable time frame, therefore, the large fixed costs of the plant must be averaged out over a large quantity of services that are sold relatively quickly. Ignoring this reality has put many a CLEC into bankruptcy.

An important misconception policymakers and Wall Street have about the telecommunications industry is that entry into telecommunications is somehow limited to just the cost of network construction and architecture. (Quite to the contrary, entry into telecommunications businesses requires the additional commitment of tremendous fixed and sunk costs to cover the costs of billing systems, regulatory efforts and responses, pre-positioned cash flow, general administrative costs, and, perhaps most significant of all, customer acquisition and retention costs.)

For example, Douglas (Zalbi) estimates AT&T's annual marketing expenses to be approximately \$2 billion per year from 1994 through 1997.<sup>33</sup> (Zalbi also provides evidence that marketing expenses in the long-distance industry are subject to economies of scale. Other sources indicate that

33. Id. at 9. See also Vail Records, (1994) Mar 2275 Million in Marketing, Washington, Apr. 10, 2001, at <http://www.washpost.com/archive/1994-1.html>; Same Court of Competition 5 (Mar. 24, 1999) (unpublished manuscript on file with author), available at <http://www.gothink.org>.

acquisition costs for residential local or long distance customers are about \$150 per customer, virtually all of which is sunk.<sup>34</sup> For larger businesses customers and buildings, where the stakes and margins are relatively high, the acquisition costs are expected to be sizeable.

Similarly, regulatory costs are nontrivial entry investments. Industry experts estimate that approximately 10% of the entry costs for metropolitan fiber rings and spurs are related to obtaining government approval. In some cases, "[d]isfranchising local government entities, public utilities, and private claimants can extend well beyond a year, and in some cases may never reach a successful conclusion, shunting the project before a single fiber can be buried."<sup>35</sup> Clearly, approval costs incurred for a project later abandoned have little or no value and are thus sunk. As noted *supra*, the average cost of a mile of fiber deployed in a metropolitan market is estimated by source to be \$3 million; the sunk costs related to regulatory approval are nontrivial and may represent a formidable entry barrier.

Accordingly, the magnitude of nonplant entry costs is sizeable. Table 1 illustrates the proportion of facilities' investment (measured as net plant) to total entry costs for a sample of CLECs. Entry costs are measured as the spent portion of capital invested in the firm including debt and equity.

35. See *Five Firms Whom the Heller Toll*, Bernstein Research, Feb. 1997, at 55-56; see also (Winter Results) Oct. 27, 1999), available at <http://www.ice.com/consumer/consumerpage/news>.

36. See, e.g., Declaration of A. Samuel Kelley and Richard A. Tranter, 11 At Telecomm. 1707-20258.

37. See, e.g., Declaration of A. Samuel Kelley and Richard A. Tranter, 11 At Telecomm. 1707-20258.

38. See, e.g., Declaration of A. Samuel Kelley and Richard A. Tranter, 11 At Telecomm. 1707-20258.

39. Early cost is measured by local long-term debt, other liabilities, and equity investments, minus cash and short-term investments. Plant is measured as net plant. All figures compiled from company 10-Q forms for the second quarter of 2001. X(1) Costco Inc., 2001 Securities (Quarterly Form 10-Q) (Aug. 11, 2001), available at <http://www.costco.com/investor/financials/quarterlyform10q.htm>; X(2) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 13, 2001), available at <http://www.allegianttelecom.com/pdft2410q2001.pdf>; X(3) KCR Corp., 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.kcr.com/investorrelations/docs/quarterlyform10q.pdf>; X(4) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.covad.com/investorrelations/docs/quarterlyform10q.pdf>; X(5) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(6) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(7) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(8) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(9) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(10) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(11) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(12) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(13) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(14) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(15) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(16) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(17) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(18) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(19) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(20) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(21) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(22) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(23) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(24) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(25) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(26) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(27) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(28) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(29) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(30) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(31) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(32) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(33) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(34) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(35) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(36) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(37) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(38) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(39) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(40) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(41) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(42) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(43) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(44) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(45) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(46) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(47) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(48) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(49) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(50) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(51) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(52) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(53) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(54) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(55) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(56) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(57) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(58) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(59) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(60) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(61) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(62) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(63) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(64) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(65) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(66) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(67) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(68) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(69) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(70) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(71) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(72) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(73) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(74) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(75) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(76) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(77) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(78) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(79) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(80) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(81) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(82) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(83) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(84) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(85) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(86) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(87) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(88) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(89) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(90) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(91) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(92) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(93) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(94) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(95) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(96) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(97) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(98) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(99) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(100) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(101) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(102) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(103) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(104) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(105) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(106) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(107) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(108) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(109) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(110) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(111) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(112) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(113) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(114) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(115) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(116) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at <http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf>; X(117) Q2 2001, 2001 Securities (Quarterly Form 10-Q) (Aug. 14, 2001), available at [http://www.mv](http://www.mvcc.com/investorrelations/docs/quarterlyform10q.pdf)

Entry Costs (E)	Net Plant (P)	E/P	P/E
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Entry Costs (£)	Net Plant (P)	E/P	P/E
(in thousands)	(in thousands)		
XU	\$10,739	\$1,505	\$3.06
Allongue	\$2,083	\$939	\$2.22
RCN	\$4,859	\$2,331	\$2.08
Coynd	\$2,414	\$294	\$8.20
McLeod	\$8,260	\$3,220	\$2.57
Talk America	\$429	\$88	\$5.37
Northpoint	\$1,041	\$455	\$2.29
ITC (Pacifiac)	\$1,036	\$708	\$1.46
US LEC	\$369	\$191	\$1.93
High Average			\$3.06

[illegible]

41. 47 T.S.R. ¶ 251 (X3) (Sept. 7, 2000).  
42. See Martel & Shaw, *supra* note 4, at 308. The term "latent band" has other meanings as well. In some contexts, for example, "latent band" refers to a slow, multistage build-up of capital with limited capital resource.

[illegible]



telecommunications demand to new entrants, then an ADC can enter and consolidate (or aggregate) this new nonincumbent demand for network elements dispersed among the various firms who currently purchase UNEs from the incumbent, much like building a shopping center with your anchor tenants already secured. In so doing, network-based entry occurs both in the form of new alternative network construction, and in terms of new technology investment (e.g., interconnecting a sophisticated database to the incumbents' advanced intelligent network ("AIN")) to permit advanced managed-IP products and services. Large numbers competition occurs at the retail and application level, whereas small-numbers competition occurs at the wholesale or network level. This arrangement is most compatible with the underlying economics of the telecommunications industry.

### III. THE CURRENT SITUATION: ENTRY AFTER THE 1996 ACT

In this Section, this Article examines two primary forms of CLEC entry strategy observed since the passage of the 1996 Act. Entry strategies are varied, so it is difficult to classify CLECs into broad categories. However, there appear to be two very different entry modes at a high level of generality in use: entrants that depend heavily on UNE facilities, and those that do not. While these entry strategies are apparently quite different, similarities exist between the two. Nearly all entrants, for example, must deal with the ILEC in some way.

#### A. Element-Dependent Entrants: The "Buyers."

First, there are those entrants that rely heavily on the elements of the ILEC (the dominant incumbent, integrated supplier) called element-dependent entrants ("EDEs"). This group of entrants ranges from those using total service resale to those combining ILECs' local distribution plant, from local loops to high capacity circuits, with self-supplied elements. DSL providers, for example, rely on ILEC loops and collocation space. Switch-based entrants also rely almost exclusively on ILEC loop plant and provisioning labor, such as bot-eus, which is combined with self-supplied switching UNE-P, or the combination of loops, local switching, and transport, is an element-dependent entry strategy that relies heavily on ILEC elements. In some cases, however, the UNE-P CLECs integrate their own technology into the platform to customize the service.<sup>44</sup> In fact, with the exception of total service resale, virtually all EDEs integrate some type

44. For example, Z-Tel Communications integrates a variety of call control features, Internet functionality, and voicemail with the UNE-P Z-Tel Technologies, Inc., 2000 Annual Report 10 K (Mar. 28, 2000), available at <http://www.ztel.com/annual.htm>; and Z-Tel Communications, Inc., 2000 Annual Report 10 K (Mar. 28, 2000), available at <http://www.ztel.com/annual.htm>.

of facilities with the ILEC network. Thus, as noted above, while EDEs may not be new "network" facilities-based entrants, they should nonetheless be considered to be facilities-based entrants.

A problem faced by all EDEs is the ILEC's incentive to impede new entry, and examples of these incentives in action are readily available.

44. See, e.g., Yoki Nopcehl, *CLECs Blame Bell, Bell Blame Nopcehl*, *Source: Blame Agency*, WASH. POST, Dec. 16, 2000, at E1; Peter S. Goodson, *FCC Chief Sees: Blame Competition*, WASH. POST, May 8, 2001, at F1. Indeed, the incumbents are keeping the FCC's Enforcement Bureau busier than ever. For example:

(i) On September 14, 2001, the FCC's Enforcement Bureau announced that it entered into a Consent Decree with Verizon Communications, Inc. ("Verizon"), under which Verizon will make a "voluntary payment" of \$77,000 to the U.S. Treasury and will take certain remedial actions regarding its collocation practices. Verizon Comm., Inc., *Order*, 16 F.C.C.R. 16270 (Sept. 14, 2001).

(ii) On May 29, 2001, the FCC affirmed the \$93,000 fine imposed by the Commission's Enforcement Bureau in March 2001 against SBC Communications, Inc. ("SBC") for violating reporting requirements that the Commission imposed pursuant to its approval of the merger application of SBC and Ameritech SBC Comm., Inc., *Apparent Liability for Forfeiture, Order on Review*, 16 F.C.C.R. 12396, 23 Comm. Reg. (P & F) 1517 (May 29, 2001).

(iii) Similarly, on January 18, 2001, the FCC sought to fine SBC \$91,500 after an independent audit discovered that SBC failed to comply with the FCC's rules that require incumbent telephone companies to allow competing telephone companies to place equipment in the incumbents' facilities. In particular, the Commission found that SBC failed to promptly install or remove all incumbents' equipment that have run out of collocation space or competitors do not waste time and resources applying for collocation space when time waits. SBC Comm., Inc., *Apparent Liability for Forfeiture, Notice of Apparent Liability for Forfeiture*, 16 F.C.C.R. 1012 (Jan. 18, 2001).

(iv) On November 2, 2000, the FCC "settled" with BellSouth Corporation to have them make a "voluntary payment" of \$730,000 to the U.S. Treasury and to take important steps to improve its compliance with FCC rules relating to the negotiation of interconnection agreements between competing carriers. BellSouth Corp., *Order*, 15 F.C.R. 21736 (Nov. 2, 2000). Indeed, the FCC's investigation disclosed that, for more than six months in 1999, BellSouth failed to provide a competitive with cost data to support BellSouth's proposed prices for unbundled carrier loops, despite the competitor's written request for such data. *Id.* para. 3. In addition to the \$730,000 voluntary payment, the Consent Decree obligates BellSouth to adopt procedures for expedited access to confidential information, including issuance of a standard nondisclosure agreement that examples with the relevant FCC rules, and to adopt procedures for competitors to elevate disputes regarding disclosure of confidential information to higher levels within BellSouth. *Id.* paras. 13, 15. In addition, BellSouth will provide training to its negotiators concerning the relevant statutory and

Additionally, EDEs are subject somewhat to the whims of regulation. Past and potential regulatory failures, and the frequent capture of regulatory agencies by the ILECs, make element-dependent entry a somewhat risky endeavor.<sup>43</sup> These risks, however, are at least partially offset by the decreased risk provided by the reduction in sunk cost investments. Because regulators can substantially impact the financial condition of EDEs, regulatory costs for EDEs can be substantial.<sup>44</sup>

Opportunities for sabotage of EDEs by regulators are always at hand. The FCC, for example, has shown a willingness to remove elements from the list of unbundled elements for less than compelling reasons.<sup>45</sup> For example, the FCC does not require that the ILEC provide unbundled local switching to CLECs whose customers have more than three access lines and are located within the densest markets. The basis for the FCC's switching exclusions was that a few CLECs had deployed switching equipment in some dense markets.<sup>46</sup> Notably, many of these switches were deployed by now-bankrupt CLECs, and much of that switching capacity

<sup>43</sup> Regulatory requirements, as well as BellSouth's revised procedures, *id.* para. 14.

<sup>44</sup> Notwithstanding these ostensible enforcement actions by the FCC (which are supposed to be one of the counterpoises of Chairman Michael Powell's agenda for the FCC), what is extremely important to recognize here is that these cases are the administrative equivalent of a "no contest" plea. Indeed, as there is no formal record kept in the proceeding and guilty parties are only required to make a "voluntary contribution to the U.S. Treasury" as part of the settlement, the FCC has very deliberately refused to make an explicit finding of fact. As a legal matter, therefore, these settlements have little or no probative weight in a subsequent criminal or civil court of law. Besides, if a firm perceives it will make one dollar more by deterrence than by competition, then that firm will always choose deterrence.

<sup>45</sup> See Lawrence J. Spivack, *The Four Horsemen of the Unbundled Apocalypse*, *Comm. Wks. J.* 1, April 1, 2002. For a more detailed exposé of the FCC's regulatory failures of the last several years, see generally NAI *reg. & serv. an.*, *supra* note 5.

<sup>46</sup> Despite the problems with element-dependent entry, the RJE entry strategy is today the most effective at providing consumer choice in local telecommunications. In fact, those EDEs with the greatest reliance on the ILEC are most successful in acquiring market share. Element-dependent strategies such as UNE-P allow for the rapid accumulation of market share without the need to sink costs in the network. The relative success of UNE-P, particularly UNE-P CLECs, perhaps has lulled regulatory risks. In the regulatory arena, a customer base is a commodity and UNE-P CLECs may have acquired sufficient market share to discourage regulatory sabotage of that particular entry strategy.

<sup>47</sup> See e.g., *Review of Reg. Requirements for Incumbent LEC Broadband Telecommunications, Notice of Proposed Rule Making*, CC Docket No. 01-337 (Dec. 20, 2001), available at <http://www.fcc.gov/edocs/publications/2001/01-337.pdf>; *Review of the 251 Unbundling Obligations of Incumbent Local Exchange Carriers, Notice of Proposed Rule Making*, CC Docket No. 01-339 (Dec. 20, 2001), available at <http://www.fcc.gov/edocs/publications/2001/01-339.pdf>.

<sup>48</sup> Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, *Third Report and Order and Further Notice of Proposed Rule Making*, 15 F.C.C.R. 1696, 18 *Comm. Reg.* (P & F) 888 (1999).

was not designed for the port-side services that substitute for unbundled switching. The switching exclusion is currently being reconsidered at the FCC, however. Further, the FCC is presently considering an effort by the ILECs to eliminate high-capacity circuits from the list of unbundled elements. Generally, high-capacity unbundled loops can be more than half as costly as equivalent special access service purchased out of ILEC retail tariffs. Thus, the ILECs' desire to remove high-capacity circuits from the list of unbundled elements is apparent. And, the FCC's review of section 251 applications to permit ILECs to vertically reintegrate and to provide in-region interLATA service appears now to be little more than a formality, with approval a near-guarantee.<sup>49</sup>

While excluding particular elements from the list of unbundled elements certainly interfaces with their purchase, high prices for elements can be an equally effective deterrent to entry. Important to the purchase of the ILECs' elements is that the price of these elements is supposedly set equal to total element long run incremental costs ("TELRIC").<sup>50</sup> ILECs strongly oppose TELRIC pricing, and the pricing standard has been challenged in court since its conception in the FCC's *First Report and Order* implementing section 251 of the 1996 Act.<sup>51</sup> Generally, the ILECs oppose TELRIC pricing because the prices for elements are alleged to be confiscatory (i.e., are "too low" or "below costs") and therefore somehow result in unlawful "takings."<sup>52</sup>

<sup>49</sup> See *Nebraska & Spivack, supra* note 4, at 226-31.

<sup>50</sup> TELRIC is a method of determining the cost of telephone service based on the forward-looking incremental cost of equipment and labor without taking into account the historical, or embedded, cost. The pricing method is based on a hypothetical network using the most efficient technology available. See 47 C.F.R. §§ 51.502, 51.505 (2000); Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, *First Report and Order*, 11 F.C.C.R. 15499, 4 *Comm. Reg.* (P & F) 1 (1996) (hereinafter *First Report and Order*), vacated in *part*, *sub nom.*, *Id.*, 120 F.3d 753 (8th Cir. 1997), *cert. denied*, *Id.*, 531 U.S. 1124 (2001).

<sup>51</sup> *First Report and Order*, *supra* note 50, para. 555-607, *aff'd in part and vacated in part sub nom.*, *Competitive Telecommunications Act*, 117 F.3d 1065 (8th Cir. 1997) and *Id.*, 120 F.3d 753 (8th Cir. 1997), *aff'd in part and vacated in part sub nom.*, *Id.*, 120 F.3d 753 (8th Cir. 1997), *aff'd in part and vacated in part sub nom.*, *Id.*, 120 F.3d 753 (8th Cir. 1997), *cert. denied*, *Id.*, 531 U.S. 1124 (2001); Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, *Order on Reconsideration*, 11 F.C.C.R. 13042, 4 *Comm. Reg.* (P & F) 1057 (1996); Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, *Second Order on Reconsideration*, 11 F.C.C.R. 19718, 5 *Comm. Reg.* (P & F) 420 (1996); Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, *Third Order on Reconsideration and Further Notice of Proposed Rule Making*, 13 F.C.C.R. 12460, 8 *Comm. Reg.* (P & F) 1206 (1997).

<sup>52</sup> See e.g., *Id.*, *supra* note 51, 13 F.C.C.R. 12460, 8 *Comm. Reg.* (P & F) 1206 (1997) (U.S. Sup. Ct. 2001) (No. 00-511); Reply Brief for Petitioners, *Various Comm. L. Inc. v.*